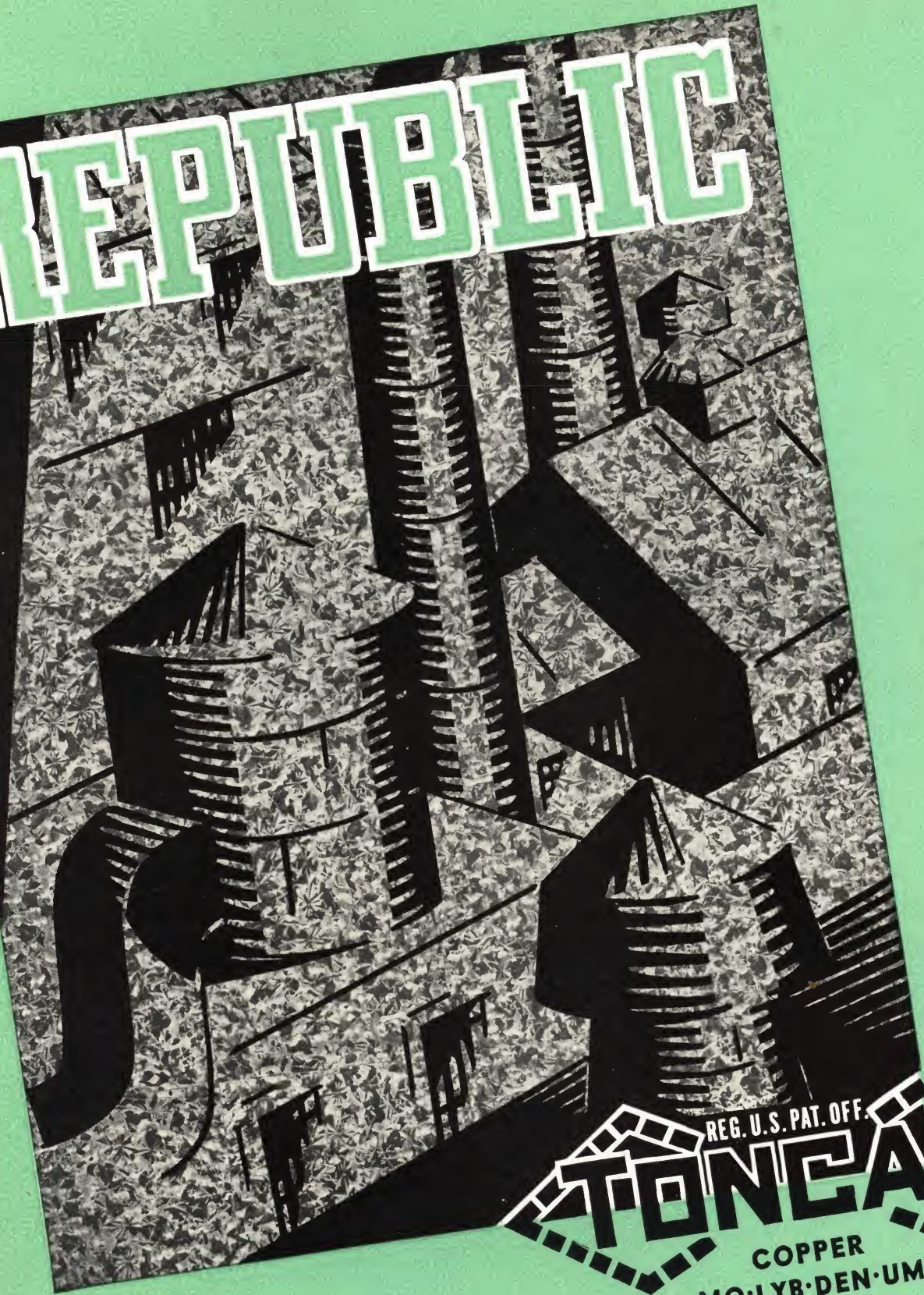


REPUBLIC



REG. U.S. PAT. OFF.

TONGAN

COPPER
MO·LYB·DEN·UM
IRON

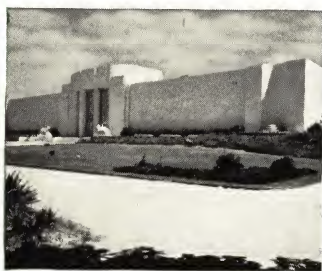
What is TONCAN IRON?

AS originated over 29 years ago, Toncan Iron was a highly refined iron, unalloyed with other elements but containing a minimum of rust promoting impurities. Subsequent changes resulted from continuous research and relentless testing. Copper, in proper proportion, was alloyed with iron to form a new iron-copper alloy which was more resistant to rust than the original iron. Then followed the addition of molybdenum which produced an iron-copper-molybdenum alloy with resistance to rust never before attained. Experience has demonstrated that neither copper nor molybdenum alone can contribute its full individual properties to

the iron—it is only through the addition of *both* in correct proportion that these can be realized. Such is Toncan Iron of today . . . an open hearth iron, scientifically refined to reasonable limits, in which not less than .40% copper and .07% molybdenum are uniformly dissolved . . . an alloy with a proved superior resistance to rust among the ferrous metals in its price class. Time and tests have conclusively proved that Toncan Iron brings to users of *sheets, plates, finished products, and pipe*, certain outstanding advantages which are briefly enumerated on the following pages.

HOW TONCAN IRON COMBATS RUST *in...*

Monumental Buildings



Seattle Art Museum

For all interior sheet metal work.

Stores



House of Flowers

For standing seam roofing and siding.

Residences



Residences

For Corinthian Columns.

Factory Buildings



Miles Laboratories, Inc.

For a major portion of the duct work.

Toncan Iron is a rust resistant ferrous material chiefly because it is an alloy of iron, copper, and molybdenum—the alloy that possesses the most inherent resistance to solution, and hence to rust, of any commercial ferrous material in its price class—the alloy that is most noble, and hence most rust resistant.

Toncan Iron is rust resistant also because it is chemically uniform.

Chemical uniformity is essential for maximum rust resistance, as otherwise chemical differences would create electro-potential differences which hasten the rate of solution in a harmfully localized and selective manner.

Furthermore, Toncan Iron is structurally uniform. The proper combination of the alloying elements, copper and molybdenum, under the influence of proper furnace and rolling practice, creates and maintains a fine equi-axed grain structure which contributes additional rust resistance.

It should be pointed out that under conditions favoring rust formation, a protective film may be found on the surface of Toncan Iron. This film is not of the loose, flaky type usually associated with rusted metals but is darker, more inert, denser and more adherent. It is, in fact, so adherent that it actually protects the uncorroded surface beneath it.

Where TONCAN IRON CAN BE USED

Toncan Iron offers to the architect the highest degree of resistance to rust and corrosion obtainable among ferrous metals in its price class. It also assures unsurpassed ductility and working qualities. Because of its versatility, Toncan Iron has met with broad

usage and has proved itself in countless installations under severe conditions.

The list below will serve to show some of the more common applications of Toncan Iron in the building field.

Air conditioners	Clothes chutes	Ducts, heating, ventilation and air conditioning	Hotel and restaurant equipment	Pilasters	Skylights
Airplane hangars	Clothes dryers	Dust collectors	Humidifying pans	Playground equipment	Smoke pipe
Awning covers	Coal chutes	Eaves trough	Incinerators	Radiator shields	Stand pipe
Balustrades	Condensation pans	Electric heaters	Kitchen cabinets	Range boilers	Stationary tubs
Bathroom cabinets	Conductor pipe	Electrical terminal boxes	Laboratory equipment	Ranges	Switch boxes
Blower ducts	Coping	Fan housing	Laundry tubs	Reflectors	Tanks
Boiler breechings	Cornices	Fire doors	Lighting fixtures	Refrigerators	Underground garage holders
Boiler jackets	Corrugated culverts	Flashing	Lockers	Registers	Urns
Bridge arches	Dampers	Furnaces and pipes	Louvers	Roofing	Vats
Brine tanks	Dishwashers	Gas radiators	Mail boxes	Roof flashings and valleys	Ventilators
Bulletin boards	Doors (exterior)	Gas and oil pipe	Marquees	Rubbish burners	Waste paper boxes
Cabinet heaters	Downspouts	Gravel strips for roofs	Metal ceilings	Septic tanks	Water tanks
Cabinets	Drainboards	Gutters	Metal doors	Shingles (metal)	Window frames
Canopies	Drinking fountains	Hospital equipment	Metal lath	Siding	Window sash
Catch basins	Dryers		Metal partitions	Signs	Window ventilators
Chimney tops			Oven lining	Sinks	

TONCAN IRON IS *Easy to Form*

Toncan Iron is exceedingly ductile and can be formed into any commodity which is ordinarily made up of sheet steel or iron. It is much softer than mild steel and, because of its workability, it can be deep drawn, formed, bent, flanged, stamped or spun. It is easy to cut or shear and requires less power and less labor for working. Toncan Iron can be annealed at a temperature of 1200° to 1250° F., to relieve strains caused by working and can be normalized at a temperature of 1700° F., followed by cooling in air to improve the grain structure of the iron after working. It can be

welded, soldered, brazed, riveted, etc., and may be protected with various coatings or galvanized, galvannealed, sherardized, etc. The remarkable rust-resistance of Toncan Iron extends uniformly throughout the entire thickness of the metal—not on the surface only—and it is the only commercial ferrous material with rust-resistance practically unaffected by cold-working or deformation. Other ferrous sheet materials ordinarily first dissolve and rust most rapidly at or adjacent to parts which have been cold-worked—such as seams, cut ends, bends and punched holes.

OFFERS *Excellent Welding Properties*

The excellent welding properties and smooth-flowing behavior of Toncan Iron are valuable in that they make Toncan Iron the ideal metal for work where all joints are to be welded. Toncan Iron lends itself equally well to welding by either the electric arc or gas process. In gas welding, a slight reducing flame should be maintained in order to reduce oxidation to a minimum. In electric arc welding, the use of coated Toncan Iron Welding Rod is recommended.

In gas welding, the deposited metal is practically as resistant to corrosion as the metal itself. This is due to the fact that there is no change in the alloy during the welding operation, for the copper and molybdenum remain unaffected in their relation to the iron with which they are alloyed. Practically the same results can be obtained by the electric arc method, but the use of Toncan Iron electrodes is recommended. The use of Toncan Iron Welding Wire insures a completed job of uniformly high resistance to rust and corrosion throughout.

Physical Properties AND Constants

The analysis and the chemical and structural uniformity of Toncan Iron assure satisfactory and dependable physical properties. Toncan Iron is unique in that it combines with its remarkable rust- and corrosion-resistance, physical properties not found in the best grades of open-hearth steel. Many of these properties are due to the alloy addition of molybdenum. This element entirely dissolves without loss in the iron and thereby has a positive and beneficial effect. It produces a

grain refinement which results in an improvement in strength and ductility, as well as greater rust-resistance. It increases the ability of the metal to withstand shock. It increases the susceptibility of the metal to heat treatment. It increases the elastic ratio, that is, the ratio between elastic limit and tensile strength. These advantages are reflected in the following figures, showing a range for all Toncan Iron Products.

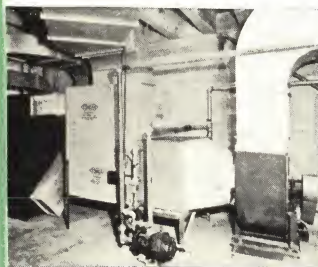
Physical Properties

Tensile Strength—45,000-58,000 lbs. per sq. in.
Elastic Limit, 30,000-40,000 lbs. per sq. in.
Elongation in 2 in., 30-40%.
Reduction of Area, 60-80%.
Rockwell Hardness, 36-46 (B scale).
Brinell Hardness, 90-120.
Specific Gravity, 7.88 approximately; about 2% greater than that of unalloyed iron or steel.
Electrical Conductivity, about 12½% that of copper.
Thermal Conductivity, slightly better than steel or iron products.
Co-efficient of Expansion, .00000674 in. per degree F. melting point, 2775° F.

Physical Constants

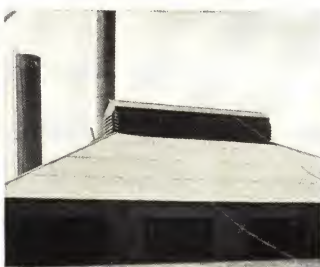
Weight—283 lb./cubic inch.
Specific gravity—7.88 or approximately that of iron or steel.
Melting point—2775° Fahrenheit.
At room temperature (20° C. or 68° F.):
Electrical resistivity—eight times that of copper or approximately .0000137 ohm/cm. cube = 13.7 microhm/cm. cube = 77 ohm/circular mil foot.
Electrical conductivity—12½% that of copper or approximately 73,000 reciprocal ohm/cm. cube = .013 ohm/circular mil foot.
Thermal conductivity—Slightly better than iron or steel or approximately .18 cal/cm. cube/sec/degree C = .7 watt/cm. cube/sec/degree C.
Linear co-efficient of thermal expansion—.0000121 cm./cm./degree C., 0-100° C. = .00000674 inch/inch/degree F., 32-212° F.

Office Buildings



Associated Telephone Co.
For air conditioning ducts.

Industrial Buildings



Grand Rapids Malleable
Iron Works
For roofing.

Food & Beverage Plants



A. Coors Company Brewery
For air conditioning ducts in fermentation cellar.

Public Buildings



County Court House
For covering of dome.

TONCAN IRON *for* PERMANENCE



TONCAN IRON *Sheets*

Forms AND Finishes

Hot-Rolled, Galvanized, Galvannealed, Terne Coated Flat Sheets, in all the usual gauges and various popular forms of roofing, galvanized or painted, are available at all times. Roofing may be had in 1¼, 2,

Sizes AND Gauges

COMMERCIAL GALVANIZED AND SPECIAL TIGHT COAT, as well as formed roofing products. 12 to 28 U. S. Gauge, inclusive. Width range, 24 in. to 48 in. Length, 60 in. to a maximum of 144 in.

HOT-ROLLED SHEETS—8 to 26 U. S. Gauge, inclusive. Width range, 12½ in. to 60 in. Length, 30 in. to a maximum of 192 in.

HEAVY COLD ROLLED AND LIGHT COLD ROLLED. 7 to 24 U. S. Gauge, inclusive. Width range, 24 in. to 63 in. Length, 60 in. to a maximum of 120 in.

2½ and 3 in. corrugated; Triple Drain, in Pressed Standing Seam; in 2, 3, 4, 5 and 6 V-Crimp; Pressed Standing Seam; Double Cross Lock Roll Roofing; Roll and Cap Roofing; Weatherboard Siding; Cross Corrugated; and in Plain and Rock Face Brick and Stone Siding.

LONG TERNES—14 to 28 U. S. Gauge, inclusive. Width range, 24 in. to 49 in. Length, 60 in. to a maximum of 144 in.

TONCAN IRON OVEN LINING AND TONCAN IRON GALVANNEALED—Gauges 16 to 28, inclusive. Width up to 54 in. Lengths to 144 in.

CORRUGATED ROOFING AND SIDING—

- (a) Galvanized—Present standard widths and corrugations. In all lengths, 5 ft. 0 in. to 12 ft. 0 in. in 28 gauge and heavier.
- (b) Painted —Present standard widths and corrugations. In all lengths, 5 ft. 0 in. to 12 ft. 0 in. in 26 gauge and heavier, even gauges.

Rolling Limits

TONCAN IRON SHEETS

This table indicates the rolling limits of Toncan Iron Sheets in hot rolled, galvanized, heavy hot rolled annealed and special finishes—with the exception that hot rolled, annealed Toncan Iron Sheets are not made lighter than 26-gauge, while galvanized sheets are not supplied in greater length than 144 in. nor wider than 48 in. *Uncoated sheets can be furnished in widths and lengths greatly in excess of those shown here. Details upon application.*

GAUGE	LENGTH IN INCHES															
	Width	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	44"	46"	48"	50"	52"
No. 28	144	144	144	144	144	144	144	144	144	120	120	120	120	120	120	120
No. 27	144	144	144	144	144	144	144	144	144	120	120	120	120	120	120	120
No. 26	144	144	144	144	144	144	144	144	144	144	144	120	120	120	120	120
Nos. 25 and 24	144	144	144	144	144	144	144	144	144	144	144	144	120	120	120	120
No. 23	144	144	144	144	144	144	144	144	144	144	144	144	144	120	120	120
Nos. 22 and 21	144	144	144	144	144	144	144	144	144	144	144	144	144	144	120	120
No. 20 & heavier	144	144	144	144	144	144	144	144	144	144	144	144	144	144	120	120

TONCAN IRON *Plates*

Rust-resisting Toncan Iron Plates are made in thicknesses ranging from No. 10 BWG to 2 in. Sizes range from 24 to 150 in. in width and from 190 to 640 in. in length, depending upon thickness. Hot-rolled plates are also available in Steel, Republic Double Strength Steel and Enduro Stainless Steel.

TONCAN IRON *Strip*

Hot-rolled Toncan Iron Strip is available in widths from 3½ in. to 36 in. Through special arrangements, it can be made in widths narrower than 3½ in., in which case the lightest limit is 16 gauge.

The lightest gauge in which cold-rolled Toncan Iron Strip is offered is 22 gauge. It is available in all widths.

How to Specify

TONCAN IRON SHEETS

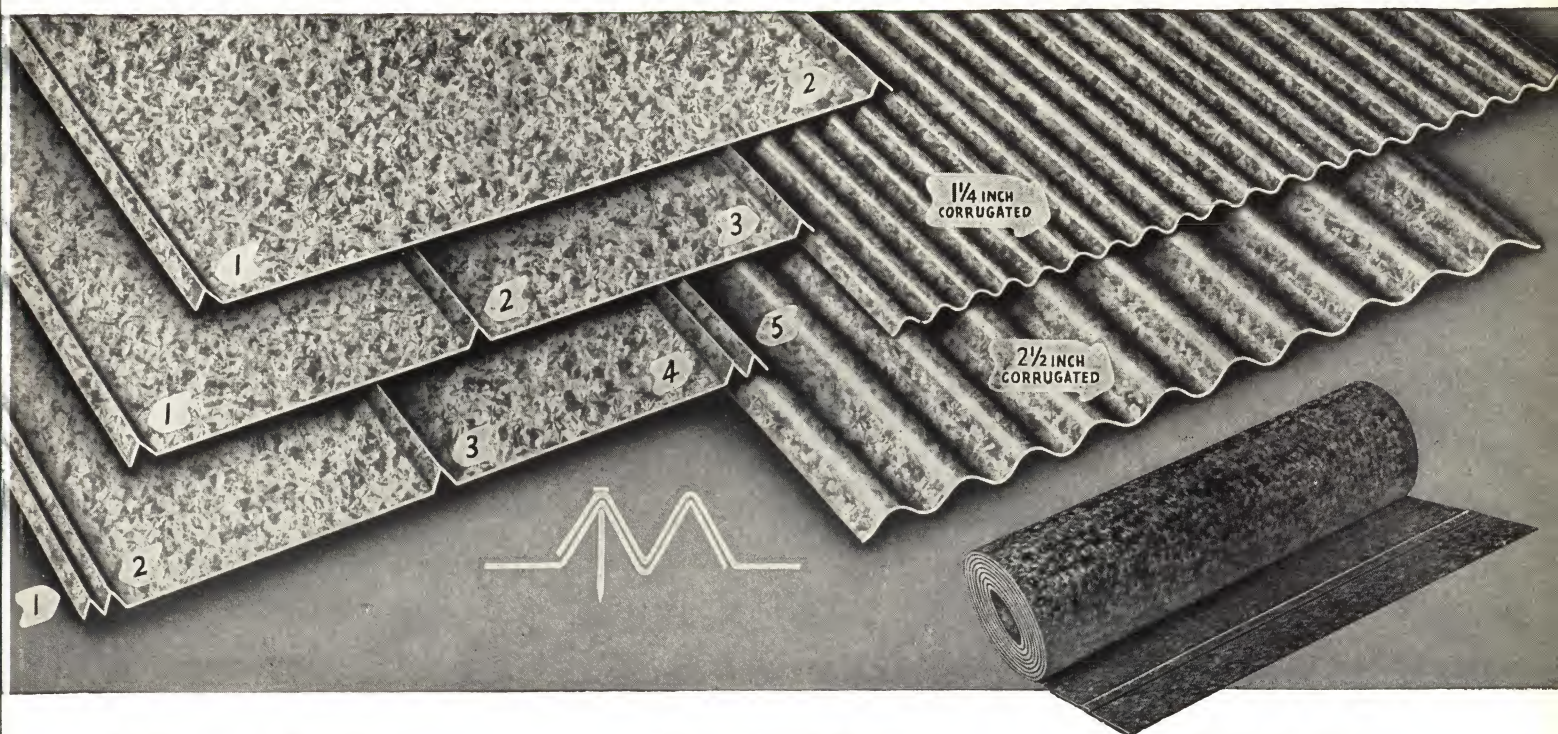
Toncan Iron Sheets are stocked by jobbers in all large cities. Be sure to specify: "All sheet metal work shall be rust-resisting Toncan Copper Molybdenum Iron manufactured by Republic Steel Corporation." In cases where public institutions do not use trade-names in specifications, Toncan Iron Sheets may be specified as: "Alloyed iron sheets of open hearth iron, copper and molybdenum produced by the basic open hearth process, containing no less than .40 per cent copper and .05 per cent molybdenum."

For your protection, every Toncan Iron galvanized sheet is stenciled at approximately two-foot intervals with the Toncan Iron trade-mark in green. Smaller formed products are die stamped with the trade-mark and maker's name. The gauge also is clearly shown.

Look for the green Toncan Iron trade-mark—it's your assurance of longer sheet life, easier working quality, and greater economy.



TONCAN IRON *for* LONG LIFE



V-Crimped Roofing

V-crimped is the oldest form of roofing, and has been used extensively. Simple in construction, reasonable in cost, can be applied over close sheathing to strips spaced four or five inches apart or over old shingles. The 3 V-crimped is a pleasing variation from the standard and makes a stiffer sheet, while 5 V-crimped is still stronger. All three styles are supplied in lengths of 5, 6, 7, 8, 9, 10, 11 and 12 ft. and in gauges 24 and lighter. Actual covering width of each style is 24 inches.

Corrugated Sheets

Corrugated sheets offer the advantage of light weight with great lineal rigidity. This advantage, plus the fire protection offered accounts for their almost universal use in roofing and siding for industrial buildings, warehouses, mine buildings, and other large structures in the vicinity of railroads. Corrugated sheets are also an ideal material for barns, garages, sheds, and a wide variety of other buildings. The 1 1/4-in. style is supplied in gauges 20 and lighter; the 2, 2 1/2 and 3-in. style in gauges 10 and lighter. Both styles are 26 or 27 1/2 in. wide; lengths, 5, 6, 7, 8, 9, 10, 11 and 12 ft.

Roll Roofing

Especially useful where pitch of roof is slight and for wide areas. Cross seams are double locked. Each roll contains 50 lineal ft. Covering width is 24 in. Gauges 26, 28 and 29. Also available in Roll and Cap (with caps and cleats), and Self-Capping Roll Roofing.

Pressed Standing Seam Roofing

Strong and attractive, this is one of the most perfectly water-tight of all metal roofings when properly applied, as no nails are driven through the roofing sheets. Covering width, 24 in. Lengths, 5, 6, 7, 8, 9, 10, 11 and 12 feet. Galvanized; gauges 28, 26 and 24. Painted; gauges 26 and 24.

Ridge Roll—Plain and Corrugated

The plain is made with or without nailing flange; length, 10 ft. Size of rolls, 1 1/4, 1 1/2, 2, 2 1/2 and 3 in. Size of aprons, 13 1/4, 2, 2 1/4, 3 and 3 1/2 in. Girths, 7, 8, 10, 12 and 14 in. Gauges 28 and heavier.

The corrugated ridge roll is used with corrugated roofing. Lengths, 28 and 96 in. Made with 2 1/2 or 1 1/4-in. corrugations with 2-in. roll; 4-in. apron; 12-in. girth.

Republic Triple Drain Roofing

Republic Steel's new Triple Drain Roofing is the ideal non-syphoning drain roofing. Not just a single drain, not merely a double drain—there are actually three drains. With this vastly improved design, neither driving rain nor capillary attraction (syphonage or seepage) can cause leaks. For convenience in erection, blue lines clearly indicate proper nailing areas. Galvanized Lock, Drive Screw Lead Seal Nails are recommended. For roofs of 1/4-in. pitch or more, covering width—24 in. Lengths, 5 to 12 ft., inclusive. Triple Drain adjustable ridge roll, end wall flashing, gambrel roof joints, overhanging eaves drip and gable end starters are also available.

Cross Corrugated Sheets

Used for elevators and other high buildings where there is some motion of the building in the wind or where the structure may settle. The nails in each sheet are driven 2 in. above the edge of the sheet below, which allows the building to settle or move without loosening the sheets. The standard size for this type of sheet is 26 x 32 in., providing for a covering width of 24 in., with a 2-in. lap.



TONCAN IRON PRODUCTS *in Air Conditioning*

Corrosion has long been a major problem in the field of air conditioning—corrosion affecting both central station systems and air conditioning ducts. Toncan Iron Sheets having already established records for long life under severe conditions were used with marked success for ducts and other sheet metal applications. The marked superiority of Toncan Iron

Pipe for water supply, circulating and effluent lines, ammonia cooling coils and steam coils has been amply demonstrated. The reason for this outstanding performance lies in the base of the metal itself—an alloy of refined open hearth iron, copper and molybdenum which possesses greatest corrosion-resistance among ferrous metals in its price class.

Corrosion Is Major Problem

In the selection of ferrous materials for air conditioning systems, the architect and the engineer are faced with a definite problem of combating corrosion in (1) central station air conditioning units and (2) ducts through which the conditioned air is carried to different parts of the building. Replacement of failed metal parts in air conditioning installations is an extremely costly matter. Hence, insurance of maximum life for these parts is a fixed responsibility of the architect or engineer.

Corrosion in Central Station Systems

In this type of air conditioning system, impurities are removed from the air in varying degrees by passing it through water sprays. The impurities which are thus removed by washing are mainly acidic in character, such as carbon dioxide, sulphur dioxide and, to a lesser degree, sulphur trioxide. The system also acts as a humidifier or dehumidifier according to outside weather conditions.

Both the water supply lines and the circulating or effluent lines are subject to corrosive conditions—the supply lines from raw water and the circulating lines from water containing impurities removed from the air. In many cases the water supply is treated to remove impurities which tend to attack the pipe. Such treatment, however, is not fool-proof. The pipe which carries the water to the sprays must be able to withstand corrosive attack during any period when conditions are *abnormal* and when all impurities are *not* removed. Even though the water may be satisfactorily treated for six days out of the week, provision must be made to combat corrosion on the seventh day when treatment may not remove all impurities.

Superiority of Toncan Iron Pipe for these lines is due to the

high corrosion resistance of the metal demonstrated in both laboratory and field.

Corrosion in Air Conditioning Ducts

The life of galvanized ferrous sheets in duct systems is affected by the following:

(1) Moisture originally present in the air as water vapor, or moisture held in mechanical suspension deposits out on the sheet as a result of temperature changes. This applies to *both* the interior and exterior of the duct. A cold air duct passing through a warm room will "sweat" on the exterior.

(2) Moisture deposits out in certain critical areas of the ducts as a result of the circuitous, angular paths often necessary. Air flow obstructions cause deposit of moisture mechanically and electro-mechanically.

(3) Moisture deposits out as a result of the presence of dust particles or hygroscopic products of corrosion.

(4) Improperly or insufficiently washed or filtered air contaminates the moisture with sulphurous acid, sulphuric acid and hydrogen sulphide.

THESE TESTS SHOW WHY TONCAN IRON SHOULD BE USED

Test 1—Air conditioning system operates 8 hours a day for 5 days a week. Test specimens immersed in *untreated* water in dehumidifier.

Test 2—Air conditioning system operates 24 hours a day, 7 days a week. Test specimens immersed in *treated* water spray in dehumidifier. Results at top of next page.



Purdue University, Lafayette, Indiana

Toncan Iron Sheets used for Air Conditioning Ducts. Architect—Walter Scholer

Material	Milligrams per sq. in.		Appearance	
	Test No. 1	Test No. 2	Test No. 1	Test No. 2
Plain Open	73.2	.93	Deep, scattered pits	Few shallow pits
Hearth Steel	71.8	.80	Deep, scattered pits	Fewer shallow pits
Copper-Bearing Steel	67.7	.67	Shallow scattered pits—uniform attack	No pits—uniform attack
Toncan Iron				

The above results of scientifically conducted tests show the

REPUBLIC TAYLOR *Roofing Ternes* — “Target and Arrow Brand”

Taylor Roofing Ternes are steel sheets coated with a tin-lead alloy for protection against corrosion. Roofing ternes are frequently referred to as tin roofing by the trade. Since 1810 the Taylor name has identified roofing ternes of the high quality obtained only by coating the sheets by means of the so-called “old style” process. This process calls for craftsmanship of the highest order and insures perfect amalgamation of the three

Advantages

1. Durable.
2. A time-tried, long-established material.
3. Easily applied.
4. Adaptable to any surface.
5. Moderate first cost.
6. Low maintenance cost.
7. High salvage value.
8. Easily and quickly repaired if damaged.
9. Neat, attractive appearance.
10. Retains good appearance with age.
11. Light weight.
12. Not affected by heat or cold.
13. Properly grounded, is protection against lightning.
14. Fire-proof.
15. Weather-resisting.

Forms, Sizes and Gauges

Republic Taylor Copper Bearing Roofing Ternes are available in standard flat sheets and in rolls of 100 sq. ft. and 50 and 100 lineal ft.

Flat sheets are available in two thicknesses, IC (approximately 30 Gauge, U. S.) and IX (approximately 28 Gauge, U. S.). Standard sheet sizes are 14 in. x 20 in. and 20 in. x 28 in. Coating weights are 8, 15, 20, 25, 30 and 40 pound and the famous Target and Arrow Brand.

Rolls are available in the two thicknesses, IC and IX. Rolls are made in 100 sq. ft., 50 and 100 lineal ft. sizes. Widths are 14 in., 20 in. and 28 in. Painted or unpainted. Single or double locked seams. Soldered or unsoldered.

Specifications — “Tin Roofing Work”

“All tin used on this building shall be Republic Taylor Roofing Ternes as manufactured by Republic Steel Corporation. No substitute for this brand will be allowed. Use IC thickness for the roof proper, decks, etc., and IX thickness for valleys, gutters, and spouts, as required by design. One coat of red lead, iron oxide, metallic brown or Venetian red paint, with pure linseed oil, shall be applied to the under side of the tin before laying.

“For flat-seam roofing, edges of sheets to be turned $\frac{1}{2}$ -in.; all seams to be locked together and well soaked with solder. Sheets to be fastened to the sheathing-boards by cleats spaced 3 in. apart, cleats locked in the seams and fastened to the roof with two 1-in. barbed wire nails; no nails to be driven through the sheets.

“For standing-seam roofing, sheets to be put together in long lengths in the shop, cross seams to be locked together and well soaked with solder; sheets to be made up the narrow way in the rolls and fastened to the sheathing-boards by cleats spaced 1 ft. apart.

“Valleys and gutters to be formed with flat seams well soldered, sheets to be laid the narrow way.

“Flashings to be let into the joints of the brick or stone work, and cemented. If counterflashings are used, the lower edge of the counter-part shall be kept at least 3 in. above the roof.

“Solder to be of the best grade, bearing the manufacturer's name, and guaranteed one-half tin and one-half lead, new metals. Use rosin only as a flux.

“CAUTION—No unnecessary walking over the tin roof or using same for storage of material shall be allowed. In walking on the tin care must be taken not to damage the paint or break the coating of the tin. Rubber-soled shoes or overshoes should be worn by the men on the roof.

“PAINTING TIN WORK—All painting of the tin work to be done by the roofer, using red lead, iron oxide, metallic brown, or Venetian red paint, with pure linseed oil—no patent dryer or turpentine to be used.

ability of Toncan Copper Molybdenum Iron Sheets and Pipe to resist corrosive action of both treated and untreated water used in air conditioning. Toncan Iron justifies its use in air conditioning applications because:

(1) It affords highest degree of resistance to corrosion, thus assuring longest service performance.

(2) It will save much replacement cost, especially when ducts are built-in or are otherwise inaccessible. This is true even though best operating control of treated water and air is assured.

metals. Consequently, Republic Taylor Roofing Ternes offer unexcelled durability.

To assure maximum service life, the base metal of these ternes is rust resisting copper bearing steel. Thus, to the highly efficient protective terne coating is added the ability of the base metal to resist to a high degree the attacks of corrosion, resulting in a roofing material of easy workability and long life.

Where to Use

Republic Taylor Roofing Ternes are widely used for the roof proper, valleys, gutters, flashing and similar applications. A terne roof, properly applied, is waterproof and fire retarding. It does not require the heavy supporting structures necessary for bulkier, heavier types of roofing. It expands and contracts with temperature changes less than any other metal roof. Republic Taylor Roofing Ternes in rolls are well adapted for residence, factory, mill and business building construction. Government investigation of roofs reveals that many owners whose buildings are now roofed with terne plan to re-roof with terne when re-roofing is necessary.

Coating Weights are identified as follows:

- 8 lb.—Saxon
 - 15 lb.—Avalon
 - 20 lb.—Old Method and Fire Protection
 - 25 lb.—Old Method
 - 30 lb.—Old Method
 - 40 lb.—Old Method and Taylor Extra Coated
- Target and Arrow Brand

Sheets are stamped with weight of coating, grade and brand. This is also stenciled on boxes.

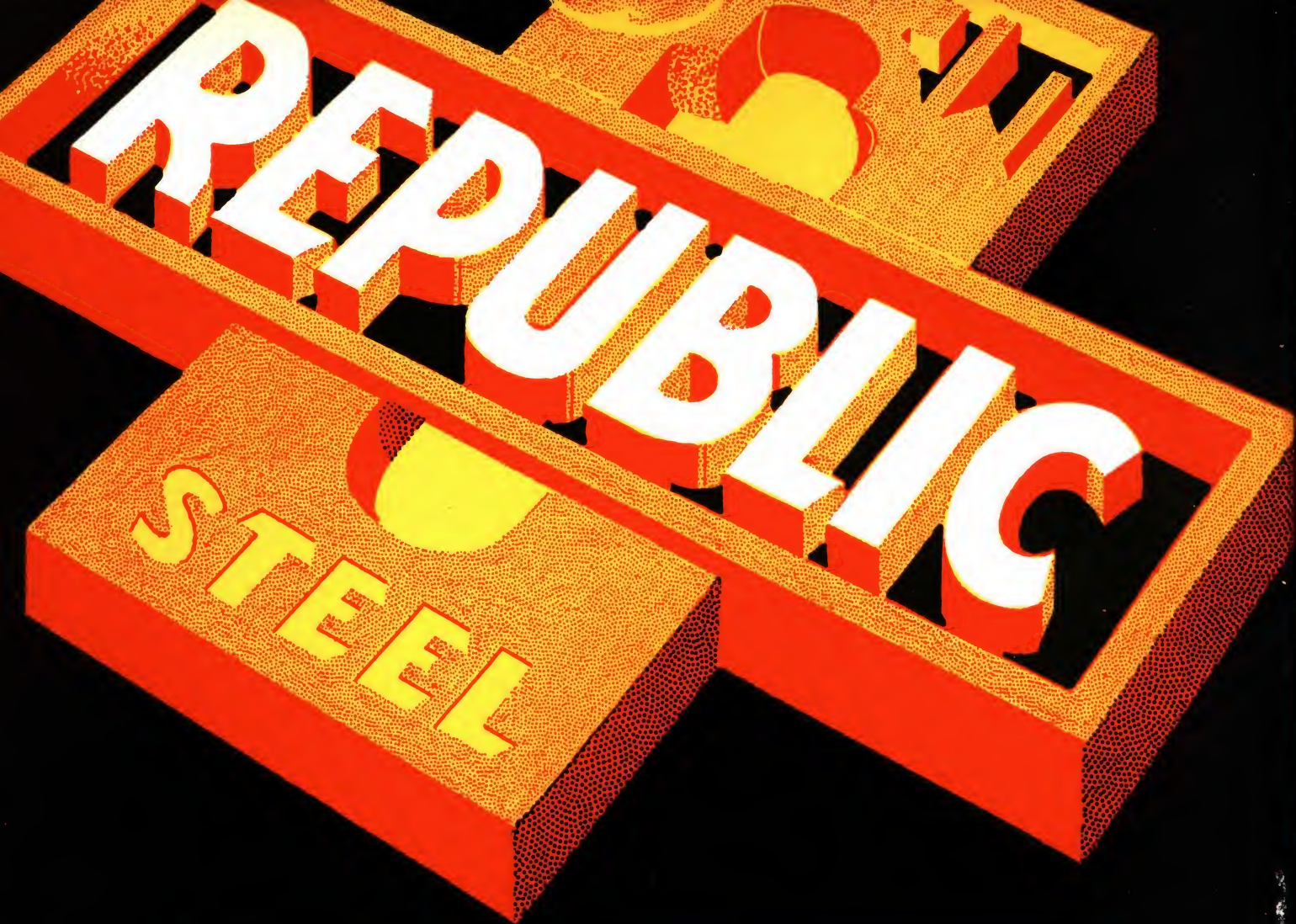
“All paints to be applied with a hand-brush and well rubbed on. Tin to be painted immediately after laying. A second coat shall be applied in a similar manner, two weeks later.

“No deviations from these specifications shall be made unless authority is given in writing by the architect. Only a first-class roof will be accepted.”



Tioga County Court House, Wellsboro, Pa.

Target and Arrow Taylor Ternes on dome built in 1835. As far as records indicate, except for paint, no repairs have been made.



REPUBLIC STEEL CORPORATION

DISTRICT SALES OFFICES

BIRMINGHAM, ALA., Empire Bldg.
 BOSTON, MASS., Consolidated Bldg.
 BUFFALO, N. Y., Liberty Bank Bldg.
 CHICAGO, ILL., McCormick Bldg.
 CINCINNATI, OHIO, Carew Tower
 CLEVELAND, OHIO, Republic Bldg.
 DENVER, COLO., Continental Oil Bldg.
 DETROIT, MICH., Fisher Bldg.
 GRAND RAPIDS, MICH., Grand Rapids Trust Bldg.
 HOUSTON, TEX., Petroleum Bldg.
 INDIANAPOLIS, IND., Circle Tower
 KANSAS CITY, MO., Fairfax Bldg.
 LOS ANGELES, CALIF., Edison Bldg.

MILWAUKEE, WIS., First Wisconsin National Bank Bldg.
 NEW YORK, N. Y., Chrysler Bldg.
 PHILADELPHIA, PA., Broad Street Station Bldg.
 PITTSBURGH, PA., Oliver Bldg.
 ST. LOUIS, MO., Paul Brown Bldg.
 ST. PAUL, MINN., First National Bank Bldg.
 SALT LAKE CITY, UTAH, Atlas Bldg.
 SAN FRANCISCO, CALIF., Rialto Bldg.
 SEATTLE, WASH., White-Henry-Stuart Bldg.
 TOLEDO, OHIO, Ohio Bank Bldg.
 TULSA, OKLA., Thompson Bldg.
 WASHINGTON, D. C., Shoreham Bldg.
 YOUNGSTOWN, OHIO, Republic Bldg.

Canadian Representative, Toronto, Ont.

EXPORT DEPARTMENT, Chrysler Bldg., NEW YORK, N. Y., U. S. A.

Warehouse Stocks of Enduro Stainless Steel, Republic Steel Pipe and Toncan Copper Molybdenum Sheets and Pipe are carried in stock in principal cities. For Local Distributors contact the nearest Republic Sales Office